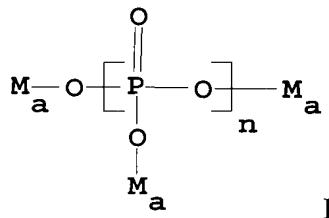


REMARKS

Due to the length of the specification herein, Applicants will cite to the paragraph number of the published patent application (PG Pub) of the present application, i.e., US 2005/0169861, when discussing the application description, rather than to page and line of the specification as filed.

The rejections of Claims 1-2, 5-7 and 13 under 35 U.S.C. § 102(b) as anticipated by, and of Claim 8 under 35 U.S.C. § 103(a) as unpatentable over, US 2,951,044 (Wagner et al), are respectfully traversed.

As recited in Claim 1, an embodiment of the present invention is an aqueous dispersion containing pyrogenically produced oxide particles of titanium, zinc, iron or cerium having an average particle size, expressed as a median value, in the dispersion of less than 200 nm, wherein **the particle sizes of the oxide particles are not distributed symmetrically** in the dispersion and the dispersion contains as dispersing agent at least one (poly)phosphate corresponding to the general formula I



wherein  $M = H$ , an alkali metal, alkaline-earth metal, ammonium ion,  $Zn^{2+}$ ,  $Al^{3+}$ ,  $Fe^{2+}$ ,  $Fe^{3+}$ , a = 1 or if  $M$  is a divalent cation, a = 1/2, if  $M$  is a trivalent cation, a = 1/3 with  $M$  being identical or different, and wherein said aqueous dispersion has a pH value of 4.5 to 7.5.  
(Emphasis added).

Wagner et al discloses suspensions of two or more different metal oxides produced by mixing into an aqueous medium oxides co-formed in the same reaction (column 1, lines 52-55). The oxides are pyrogenic oxides and may include, for example, titanium (column 2,

lines 7-11). The mixed oxides are recovered in extremely finely divided and active form, and it is possible by mechanical means to distribute them in a suitable dispersing agent and arrive at stable dispersions (column 2, lines 42-47). Wagner et al further discloses that it may be of advantage to add minor amounts of a phosphate in dissolved form to the dispersions, preferably alkali-metal phosphate, in an amount of about 0.1 to 2% and preferably 0.5 to 1% (column 2, lines 64-70). Wagner et al discloses that mixed oxides obtained from the gaseous phase ordinarily exist predominantly in particle sizes of less than about 100 millimicrons and usually of less than 50 millimicrons (column 2, lines 54-58).

Wagner et al neither anticipates nor otherwise renders the present claims unpatentable. As emphasized above, the particle sizes of the oxide particles in the claimed aqueous dispersion are not distributed symmetrically in the dispersion. As Applicants are entitled to be their own lexicographer, Applicants define a non-symmetrical distribution to mean that the arithmetic mean of the distribution is greater than the median value, and that non-symmetrical distributions include both “oblique” monomodal and multimodal distributions [0025]. Applicants disclose further that the non-symmetrical distribution of the particle sizes of the present invention is surprising since, in the case of the dispersion of pyrogenic, aggregated metal oxide particles, one would have expected a symmetrical normal distribution, which is identified from the fact that the ratio of mean value and median value of the distribution equals one [0027]. The non-symmetrical distribution of the dispersion according to the invention means that a majority of the particles has the fineness required for cosmetic applications, while a smaller portion of coarse particles has a beneficial influence on the stability and rheology of the dispersion [0028].

The Examiner finds that the particles of Wagner et al would also have non-symmetrical distribution because their disclosed processes of making are the same as Applicants. In reply, the processes are not the same. Indeed, in non-elected Claim 9, for

example, an initial dispersion stream is divided into at least two substreams, the substreams placed in a high-energy mill under a particular minimum pressure, are released through a nozzle and impact upon one another in a gas, or liquid-filled reaction chamber and are ground. Wagner et al neither discloses nor suggests any such process.

For all the above reasons, it is respectfully requested that these rejections be withdrawn.

The rejection of Claims 1-2, 5-7 and 13 under 35 U.S.C. § 102(b) as anticipated by US 5,453,267 (Kemp et al), is respectfully traversed. Kemp et al is described in the specification herein, as describing the preparation of sunscreen formulations containing 0.5 to 30 wt% titanium dioxide having an average primary particle size of less than 100 nm and 0.025 to 30 wt% of phosphate anions, wherein particles in a dispersion obtained are not suitable for further use in a sunscreen formulation, but have to be ground several times [0013]. Indeed, Kemp et al discloses and suggests nothing with regard to the above-emphasized limitation of Claim 1 that the particles in the dispersion be not distributed symmetrically therein.

As with regard to Wagner et al, *supra*, the Examiner finds that the particles of Kemp et al would also have non-symmetrical distribution because their disclosed processes of making are the same as Applicants. In reply, and for reasons discussed above with regard to the rejections over Wagner et al, the processes are not the same.

In addition, Kemp et al discloses that the discoloration of sunscreen compositions containing titanium dioxide can be substantially reduced or prevented by the incorporation of phosphate anions (column 1, lines 46-49). In Example 1, in which a sunscreen composition is prepared, titanium dioxide is dispersed into an oil phase and then mixed with components that were previously dispersed in water and homogenized at 70°C using a high shear mixer/homogenizer, prior to adding the phosphate (component 16), or alternatively, the

titanium dioxide may be added into the water phase or after all other components have been formulated (paragraph bridging columns 8 and 9). Thus, it does not appear that the phosphate anions in Kemp et al act to disperse the titanium dioxide particles therein.

For all the above reasons, it is respectfully requested that this rejection be withdrawn.

The provisional rejection of Claims 1-2, 4-8 and 12-13 on the ground of nonstatutory obviousness-type double patenting over Claims 1-10 of copending Application No. 10/456,276 ('276 application) in view of Kemp et al, is respectfully traversed. The disclosures and deficiencies of Kemp et al have been discussed above. Thus, even if the phosphate of Kemp et al were added to the aqueous dispersion claimed in the '276 application', the result would still not be the presently-claimed invention. Accordingly, it is respectfully requested that this rejection be withdrawn.

The provisional rejection of Claims 1-2, 4-8 and 12-13 on the ground of nonstatutory obviousness-type double patenting over Claims 1-10 of copending Application No. 10/256,277 ('277 application) in view of Kemp et al, is respectfully traversed. The disclosures and deficiencies of Kemp et al have been discussed above. Thus, even if the phosphate of Kemp et al were added to the aqueous dispersion claimed in the '277 application', the result would still not be the presently-claimed invention. Accordingly, it is respectfully requested that this rejection be withdrawn.

The provisional rejection of Claims 1-8 and 12-13 on the ground of nonstatutory obviousness-type double patenting over Claims 1-13 of copending Application No. 10/512,684 ('684 application) in view of Kemp et al, is respectfully traversed. The claims of the '684 application' may contain a phosphate dispersing agent that is different from, and not suggestive of, the presently-recited (poly)phosphate of general formula I. The disclosures and deficiencies of Kemp et al have been discussed above. Absent the present disclosure as a guide, there would have been no motivation for one skilled in the art to employ the particular

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phosphate of Kemp et al in place of, or in addition to, the phosphate of the '684 application'.

Accordingly, it is respectfully requested that this rejection be withdrawn.

The rejection of Claims 1-8 and 12-13 under 35 U.S.C. § 112, first paragraph, as not being enabled for when M is a species that results in salt formation, is respectfully traversed. The basis for the Examiner's rejection appears to be the structural formula, which the Examiner finds shows covalent, rather than ionic, bonding. In reply, it is clear from the specification as a whole that the formula represents phosphoric acid and typical metal (poly)phosphates well-known in the art, as supported by those exemplified in the specification ([0035]-[0036]). In accordance with well-known patent principles, an applicant is entitled to be his own lexicographer. See, e.g., *Multiform Desiccants Inc. v. Medzam Ltd.*, 133 F.3d 1473, 1477, 45 USPQ 2d 1429, 1432 (Fed. Cir. 1998) (**copy enclosed**). Accordingly, it is respectfully requested that this rejection be withdrawn.

All of the presently-pending and active claims in this application are now believed to be in immediate condition for allowance. The Examiner is respectfully requested to rejoin the non-elected process claims and in the absence of further grounds of rejection, pass this application to issue with all pending claims.

Respectfully submitted,

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